



UNITED STATES PATENT AND TRADEMARK OFFICE

dm

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,212	11/12/2003	Michael E. Connell	5083.1US (01-0428.01/US)	6326

24247 7590 10/30/2006

TRASK BRITT
P.O. BOX 2550
SALT LAKE CITY, UT 84110

EXAMINER

RICHARDS, N DREW

ART UNIT PAPER NUMBER

2815

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/706,212		CONNELL ET AL.	
	Examiner		Art Unit	
	N. Drew Richards		2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8,10-14,16-20 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,10-14,16-20 and 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/24/06 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 7, 8, 10, 13, 14, 16, 19, 20 and 22 are rejected under 35 USC § 103 (a) as being unpatentable over U.S. Patent No. 5,827,771 to Ginn et al. ("Ginn") of record in view of U.S. Patent No. 5,798,558 to Tyson et al. ("Tyson").

With regards to claims 1, 7, 13 and 19, Ginn illustrates in figures 2-4B (entire document), particularly figure 2, a ROICS (such as a transimpedance amplifier, col. 1, lines 11-12) a semiconductor substrate 12 having a front side 12c and a back side 12b and having a low ratio of height to horizontal dimension (see FIG. 2);

an integrated circuit 14 on a portion of the front side;

layers (col. 3, lines 6-10) covering a portion of the integrated circuit causing a stress on at least a portion of the substrate; and

a stress or force balancing layer 18 covering at least a portion of the backside substantially balancing the stress caused by the layers covering a portion of the integrated circuit (see col. 3, lines 27-58), the stress or force balancing layer comprising Si_3N_4 (col. 3, lines 59-67). Additionally, "a chemical vapor deposition material" is a product by process limitation (see MPEP 2113). In the instant case, the force balancing layer 18 of Ginn et al. is substantially the same as a chemical vapor deposition material and thus reads on the claimed invention.

Ginn does not show specifically a passivation layer. Tyson discloses in the abstract and col. 7, lines 15 a transimpedance amplifier with a passivation layer (step 65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a passivation layer. The motivation for doing this is to protect the underlying layers.

Regarding claims 2, 8, 14 and 20, Ginn illustrates in FIG. 2 the stress-balancing layer comprises a single component layer 18.

Regarding claims 4, 10, 16 and 22, Applicants are reminded that intended functional use (laser-marking) is given no patentable weight in claims drawn to structure. See *In re Pearson* 181 USPQ 641 and *Ex parte Minks* 169 USPQ 120.

4. Claims 5, 6, 11, 12, 17, 18, 23 and 24 are rejected under 35 USC § 103 (a) as being unpatentable over Ginn and Tyson as applied to claims 1, 7, 13 and 19 above, and further in view of U.S. Patent No. 5,731,954 to Cheon.

With regards to claim 5, Ginn and Tyson are discussed above, they do not show an adhesive layer attached to the device. Cheon illustrates in figure 1 and discloses in col. 4, lines 15-19 an adhesive layer attached to the device 30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have an adhesive layer attaching to the device 30 to a heat sink 26. The motivation for doing this is to remove heat from the device.

Regarding claims 6, 12, 18 and 24, Applicants are reminded that intended functional use (laser-marking) is given no patentable weight in claims drawn to structure. See *In re Pearson* 181 USPQ 641 and *Ex parte Minks* 169 USPQ 120.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Response to Arguments

5. Applicant's arguments filed 7/24/06 have been fully considered but they are not persuasive.

Applicant has argued that any combination of Ginn et al. and Tyson et al. does not teach the claimed invention. Applicant argues that the references do not teach the stress-balancing layer as recited in the claims. In support of this argument applicant merely recites the bulk of the claim (for instance lines 6-12 of claim 1) but fails to particularly point out how the claim is not met by the references or how the amended claim overcomes the applied rejections.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

The rejections as applied clearly teach a stress-balancing layer as claimed and thus the rejection is considered proper.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Drew Richards whose telephone number is (571) 272-1736. The examiner can normally be reached on Monday-Friday 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



N. DREW RICHARDS
PRIMARY EXAMINER